

Support for new claim 7 is found at least on page 7 and on pages 18-20.

Support for new claims 8-10 is found at least on page 8.

Support for new claims 11-14 is found at least on pages 8-11.

Rejection Under 35 U.S.C. § 112, second paragraph

Claims 1-6 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claim 1 has been cancelled and the rejection is moot.

Claim 2 has been added to clarify the phosphoramidite group is added to the 3' position of the modified nucleoside. Accordingly, the rejection should be withdrawn.

The Examiner states claim 3 is indefinite for failing to specify the chemical structural variables which define the phosphoramidite modified nucleoside. Applicants respectfully submit the specification on page 21, lines 15-22 makes it clear that the phosphoramidite modified nucleotide that results is known in the art. In In re Sneed, the court held "claims in an application are to be given their broadest reasonable interpretation consistent with specification, and that claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art." In re Sneed, 710 F.2d 1544,1548 (1983). As the Examiner notes, the specification makes reference to the Caruthers process of nucleic acid synthesis. See specification page 21, lines 21-22. Thus, the phosphoramidite modified nucleoside referred to is known to one of ordinary skill in the art and does not require further elucidation. Accordingly, the rejection should be withdrawn.

The Examiner states the term "nucleoside analog" as used in claim 5 is indefinite. Applicants respectfully submit the specification on page 3, line 16 through page 4 line-2 specifies which compounds qualify as a "nucleoside analog":

By "nucleoside" herein is meant a base attached to a ribose (furan). The base may be any base that can form an anhydro-structure, as defined below, including naturally occurring and non-naturally occurring bases. Suitable bases include, but are not limited to, uracil, thymine, cytosine and inosine, and base analogs such as xanthanine, hypoxanthanine, isocytosine, halogenated bases such as 5-halo-uracil (e.g. 5-bromo- or 5-iodo-uracil),

etc. The ribose may be either ribose or ribose analogs such as the five membered carbon ring analogs, etc. Accordingly, as used herein, the term “nucleoside” includes nucleoside analogs.

Accordingly, the rejection should be withdrawn.

Claim 6 has been amended to correct the spelling of the term “carbonydimidazole” to its proper spelling “carbonyldimidazole”. Accordingly, the rejection should be withdrawn.

Rejection Under 35 C.F.R. § 1.75(c)

The Examiner objects to claim 5 as being of improper dependent form. However, the applicants respectfully disagree. As pointed out in the specification referenced above, the term “nucleoside” includes both naturally occurring nucleosides and nucleoside analogs. Thus, a dependent claim to a nucleoside analog is proper; see M.P.E.P. §608.01(n).

Rejection Under 35 U.S.C. § 112, first paragraph

Claims 1-6 are rejected under 35 U.S.C. § 112, first paragraph, for lack of enablement. Specifically, the Examiner asserts the chemical reactants are described in generic terms only.

As the Examiner is aware, the standard for enablement is that the specification, taken in conjunction with the state of the art at the time the invention was filed, must enable one of skill in the art to make and use the invention. “An inventor need not, however, explain every detail since he is speaking to those skilled in the art.” *DeGeorge v. Bernier*, 768 F.2d 1318, 1323 (Fed. Cir. 1985); see also M.P.E.P. § 2106V(B)(2).

As previously argued, terms such as “anhydro-nucleoside” and “nucleoside analog” are art recognized terms. For example, one of the references provided by the Examiner, Nexstar ‘102, refers to cyclization reactions (see page 3, line 29 through page 4, line 3); analogs of nucleosides (see page 1, lines 25 and 27); and anydronucleosides (see page 21). Other references, such as Sebesta, et al., *Tetrahedron*, (1996) 46:14385-14402, cited by the

Examiner, use the terms nucleoside analogs and anhydronucleosides without further definition. See for example, the title, last sentence of the abstract, first sentence of the introduction, first sentence of the background, and throughout the entire paper.

The Examiner's attention is further directed to the definitions in the specification. For example, "nucleoside analog" is defined as "base analogs such as xanthanine, hypoxanthanine, isocytosine, halogenated bases such as 5-halo-uracil (e.g. 5-bromo- or 5-iodo-uracil), etc." See specification at page 4, lines 1-2. "Anydronucleoside" is defined as a "2,2'-, 2,3'- or 2,5' anydronucleoside, comprising an oxygen bridge between the C-2 of the base pyrimidine and the C-2' or C-3' of the ribose or ribose analog. See specification at page 18, line 23 through page 19, line 13. Accordingly, applicants submit the specification enables the making of modified nucleosides as defined in the specification. Applicants respectfully request withdrawal of the rejection.

Rejection Under 35 U.S.C. § 103(a)

Claims 1-6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nexstar.

The present claims are directed to methods of making nucleosides modified with electron transfer moieties and polydentate ligands, particularly for use in chelating transition metal complexes. See for example the specification at pages 7-11. Further, a primary amine must be an integral part of the electron transfer moiety. See specification at page 6, lines 8-14.

The Nexstar reference teaches a method for making modified nucleosides that does not include electron transfer moieties. In particular, Nexstar does not teach or suggest the use of electron transfer moieties used to detect the presence of nucleic acids. Nor does the Nexstar reference disclose the use of polydentate ligands as a means for providing coordination atoms for the binding of metal ions.

The Examiner is respectfully reminded a valid rejection under 35 U.S.C. § 103 based upon a single prior art reference must be supported by some suggestion of the

claimed invention or motivation to reach the claimed invention which is found in that single prior art reference. *In re Laskowski*, 10 USPQ2d 1397 (Fed. Cir. 1989).

Applicants respectfully submit the Nexstar reference does not teach or suggest making modified nucleosides comprising electron transfer moieties and/or polydentate ligands. Accordingly, a *prima facie* case of obviousness has not been made and the rejection should be withdrawn.

Applicants submit the claims are now in condition for allowance and an early notification of such is respectfully solicited. If after review, the Examiner feels there are further unresolved issues, the Examiner is invited to call the undersigned at (415) 781-1989.

The Commissioner is authorized to charge any additional fees, including any extension fees, which may be required, or credit any overpayment to Deposit Account No. 06-1300 (Our Order No. A-67412/RFT/RMS).

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Respectfully submitted,

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